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Measurement of the production cross section for single top quarks in association with W bosons in proton - proton collisions at $\sqrt{s} = 13$ TeV (Article) Open Access

Sirunyan, A.M.^a, Tumasyan, A.^a, Adam, W.^b, Ambrogio, F.^b, Asilar, E.^b, Bergauer, T.^b, Brandstetter, J.^b, Brondolin, E.^b, Dragicevic, M.^b, Erö, J.^b, Escalante Del Valle, A.^b, Flechl, M.^b, Friedl, M.^b, Ghete, V.M.^b, Hrubec, J.^b, Jeitler, M.^{b,gs}, Krammer, N.^b, Krätschmer, I.^b, Liko, D.^b, Madlener, T.^b, Mikulec, I.^b, Rad, N.^b, ...

View additional authors

^aYerevan Physics Institute, Yerevan, Armenia
^bInstitut für Hochenergiephysik, Wien, Austria
^cInstitute for Nuclear Problems, Minsk, Belarus

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Abstract

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A measurement is presented of the associated production of a single top quark and a W boson in proton - proton collisions at $\sqrt{s} = 13$ TeV by the CMS Collaboration at the CERN LHC. The data collected corresponds to an integrated luminosity of 35.9 fb⁻¹. The measurement is performed using events with one electron and one muon in the final state along with at least one jet originated from a bottom quark. A multivariate discriminant, exploiting the kinematic properties of the events, is used to separate the signal from the dominant t t̄ background. The measured cross section of 63.1 ± 1.8(stat) ± 6.4(syst) ± 2.1 (lumi) pb is in agreement with the standard model expectation.[Figure not available: see fulltext.]. © 2018, The Author(s).

SciVal Topic Prominence

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